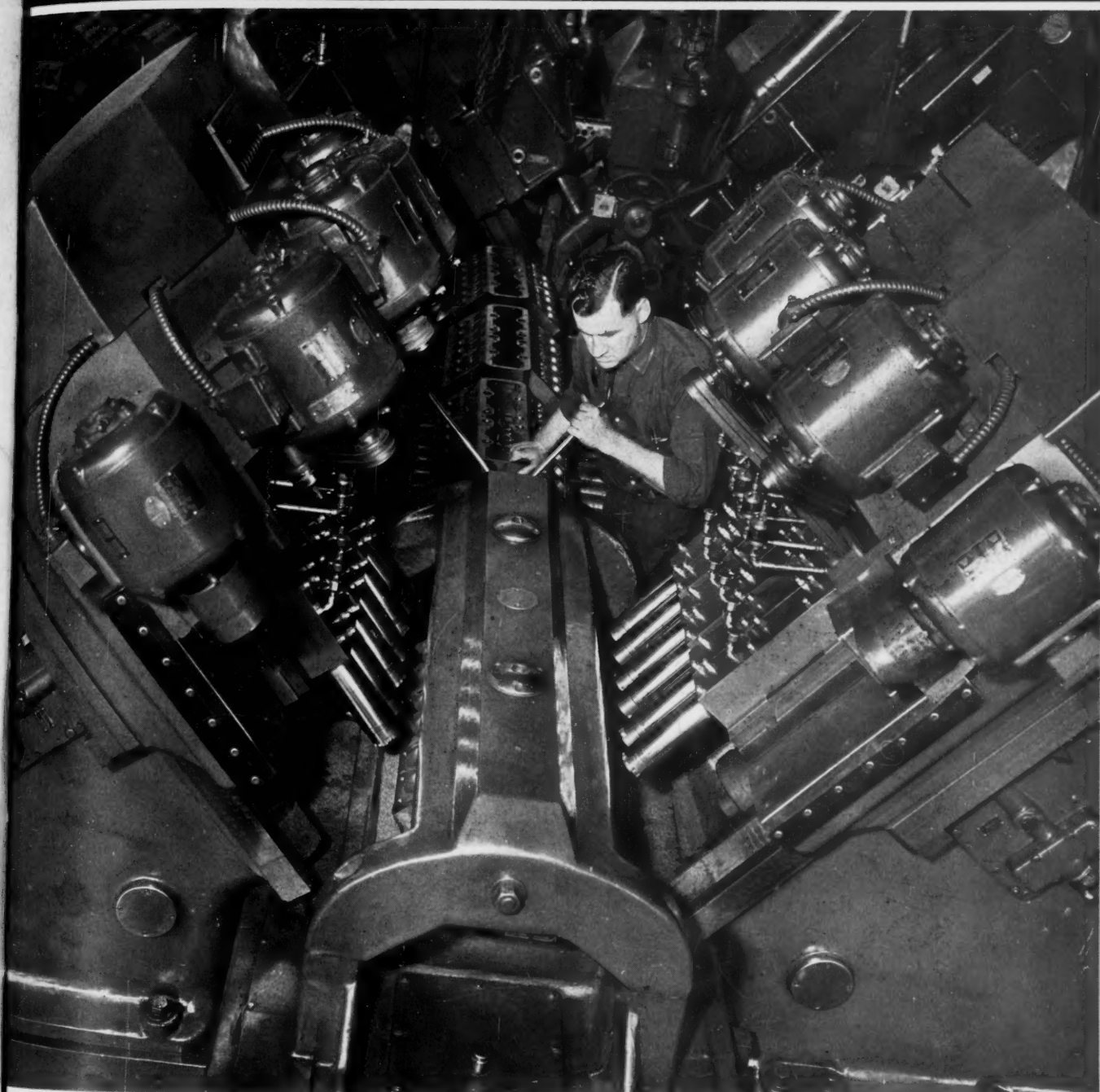


# Industrial Standardization

*and Commercial Standards Monthly*



December

Standards—The Key to Production  
(See Pages 305; 308; 314)

1940

## On the Record for 1940

**I**N the past twelve months the American Standards Association has approved 73 standards. It has authorized or started work on six new projects. It has increased its membership by several important governmental and industrial groups.

At the year's end it is customary for an organization to pause and look back. Of course there is much that the record does not tell. It does not tell, for example, that among the standards approved were several of very vital importance to industry. It does not tell that several were the culmination of years of study on the part of technical committees. The record does not tell that the year has seen completion of the first standard in a new field—photography. It does not tell the part the American Standards Association played last spring in the TNEC hearing on Trade Barriers; or that the American Standards Association has kept up its contacts with national standardizing bodies in other countries, making available to companies here and even to the British Purchasing Commission itself, material which is not obtainable anywhere else in the country.

There is other information that a record never gives—how well an organization has fitted into the needs of the country during the year, how many opportunities for additional service it has missed.

The events of the year have thrown upon industry the burden of greatly increasing its production to take care of defense needs while it must still provide people with food and clothing and radios and bathtubs and books and automobiles. Lack of adequate national standards in 1917-18 was a serious handicap to the industrial program of this country. The Defense Program is today making demands upon industry similar to those of 1918; but today we have the machinery for preventing bottlenecks in production that we did not have then.

All of this offers a challenge to the American Standards Association in 1941.

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Am. Home Economics Assn.  
Am. Institute of Bolt, Nut & Rivet Mfrs.  
Am. Institute of Elec. Engineers  
Am. Iron & Steel Institute  
Am. Petroleum Institute  
Am. Soc. of Civil Engineers  
Am. Soc. of Mechanical Engineers  
Am. Soc. for Testing Materials  
Am. Soc. of Tool Engineers  
Am. Transit Association  
Am. Water Works Association  
Assn. of American Railroads  
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Cast Iron Pipe Research Assn.  
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Electric Light and Power Group:  
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Edison Electric Institute  
Federal Housing Administration  
Federal Works Agency  
Fire Protection Group:  
Associated Factory Mutual Fire Insurance Companies  
Nat. Bd. of Fire Underwriters  
Nat. Fire Protection Assn.  
Underwriters' Laboratories, Inc.

Institute of Radio Engineers  
Mfrs. Standardization Soc. of the Valve and Fittings Industry  
Nat. Assn. of Mutual Casualty Companies  
Nat. Conservation Bureau  
Nat. Electrical Mfrs. Assn.  
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Radio Mfrs. Association  
Society of Motion Picture Engineers  
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# Industrial Standardization

Combined with Commercial Standards Monthly

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RUTH E. MASON, Editor

## This Issue

**Our Front Cover:** Fully-automatic boring apparatus used in machining the Lincoln-Zephyr engine block. In one operation, this machine establishes the 75-degree angle for all 12 cylinders of the V-type engine. It is accurate to within 1/1000 of an inch. Courtesy Ford Motor Company.

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December, 1940

Vol. II, No. 12



by  
**E. A. Prentis**

*President, American Standards Association*

## 1941 Offers New Challenge to ASA



Edmund A. Prentis

**A** YEAR ago we met in this room to discuss the future of the American Standards Association. The war had broken out then; and I remember speaking about the democratic processes by which the American Standards Association works, and which meant so much if we were to keep a world in which we have left some degree of individual freedom and liberty of action. In these twelve months all of us have been witness to events which we did not believe could happen. It is obvious that we all have, in some way, been touched by those events. The American Standards Association also has been called to fill new needs and to fit into a somewhat changed industrial pattern.

On the occasion of an annual meeting any president is sorely tempted to recite a list of the successes under his administration, but as I am not running for a third term I feel free to spend most of my time here today trying to see how well the American Standards Association is fitting into the needs of the country.

It is true that things have happened during

NOTE: This report by Mr. Prentis and the one on page 308 by Dr. R. P. Anderson, chairman of the Standards Council, are to be presented at the 1940 annual meeting of the American Standards Association, December 11.

**President finds ASA filling only in part the needs and opportunities presented by defense program and industrial requirements**

**Sees need of increased field work and direct services to industry and government**

the year that are well worth commenting upon. Last May the U.S. Treasury Department took steps to become an official member of the American Standards Association. The purpose of this move was to bring the Federal Specifications work into closer accord with current economic practice as developed through American Standards. I believe that this is an important step and that it will have far-reaching beneficial effects upon industry and government alike.

We have had some other important new affiliations during the year. The Federal Works Agency has become an ASA member as a result of its interest in building codes, traffic standards,

and safety codes. The Society of Tool Engineers is another new and very important group to join during the year. These tool engineers, as you know, are the ones who are responsible for the production lines. They have a big part to play in the present Defense Program.

#### Automobile Companies Get ASA Services

It is significant that last August the Automobile Manufacturers Association, which has been participating in ASA work for some time, made arrangements for each of its member companies to receive direct services as company members of the American Standards Association.

One internal activity to which I have given considerable time and thought in the past months is a plan to make some provision for retirement allowances for members of our hard-working staff. This has been necessary since our legal counsel informs us that the ASA does not come within the scope of the Social Security Act. To make such a provision is in line with the thinking of government, of industry, and of the general public. It will be a cause of great personal satisfaction to me if the Board which meets immediately after this session sees its way clear to take the final step in this plan which has been carefully worked out. The burden to be assumed by our association is substantially the one that would be required by the "Act" had it applied to us.

Probably most of you know that last spring the American Standards Association was invited by the TNEC to outline the role of standards in the national economy through a series of hearings. The preoccupation of government and industry with the defense program led to a postponement of these plans until after the election. Whether these hearings will be continued as planned I do not know; but the interest in ASA work aroused in the members of the TNEC at a preliminary presentation during the hearings on trade barriers is largely responsible for the fact that we have Judge Summers here with us this afternoon.

#### Defense Program Affects Activities

More important than anything I have mentioned thus far, the National Defense Program, with its need for coordination of defense-production standards, has affected many of the year's activities. ASA projects in the mechanical field, particularly those having to do with machine tools, with screw threads, and nuts and bolts, and wrench-head openings, have a vital importance in speeding up production for defense. The defense program has also been responsible for new

projects: for example, the ones on quality control, and classification of tool steels. As was to be expected, this work has added to the pressure under which the ASA was already operating.

As I say, it's a temptation to look at the very fine and far-reaching work we have done throughout the year and at nothing else. As the chairman of the Standards Council has told you, we have approved 73 standards. We have increased our membership by several important new groups. We have undertaken a number of new projects. But we have also missed some very fine opportunities during the year.

Last summer Mr. Ainsworth, the Assistant Secretary, made a trip to the west coast. This trip was taken at the instance of the U.S. Department of Labor to further cooperation of the state governments in the Middle West and Far West in the safety code program. In all, nearly a dozen states were visited. Mr. Ainsworth conferred with the labor departments and industrial commissions of these states. He conferred with municipal government officials. He met with technical societies and industrial groups, particularly in the aircraft field.

#### Knowledge of ASA Varies

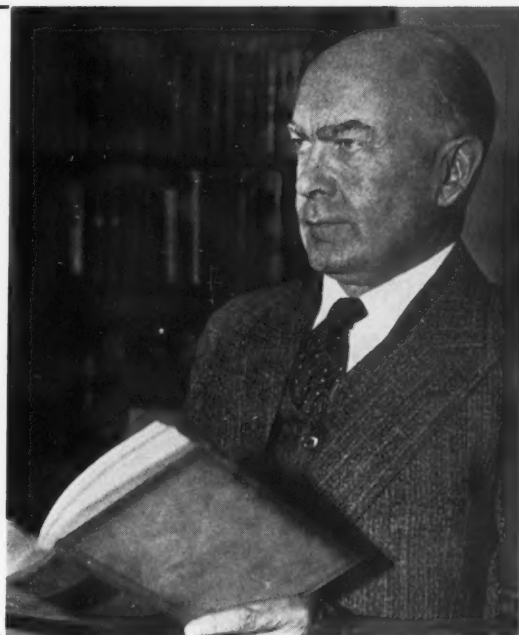
It was found that knowledge of ASA work in the groups visited varied all the way from complete ignorance of the fact that an American Standards Association even existed, to full understanding and participation in the work of the Association. Also, many had an inadequate appreciation of the significance and importance of its work.

Perhaps it is a healthy sign for an organization to find out that it is not quite as impressive as it should be. We have perhaps been too inclined to point with pride to the 3,000 men working on ASA committees and to the hundreds of organizations that are actively participating in the development of standards. To my mind this trip proved that we have so far only scratched the surface of what needs to be done. We make such efforts as we can to bring all sections of the country into the work, but all too seldom are we able to go to the industrial and governmental groups at a distance to talk over their problems with them face-to-face across the table. You can write all the letters you like but there is no substitute for this face-to-face discussion.

It is a big temptation for us who know that the Association is providing a real service for industry and that the work is well done, to point to the 413 American Standards completed and to forget that they have not yet reached their full effectiveness. Case after case could be cited of state governments that knew little about the safety

Honorable Hatton W. Sumners, Vice-Chairman of the Temporary National Economic Committee and Chairman of the Judiciary Committee of the House of Representatives, will be the speaker at the Annual Meeting of the American Standards Association, December 11.

Mr. Sumners will speak on "Co-operative Relations of Government and Industry."



code program, although they needed the work badly in view of the fact that the budgets of their own departments were not of sufficient proportions to permit them to carry on technical research or extensive committee work. In almost every case these governmental agencies when informed seemed to appreciate the value of the work carried on under ASA procedure and be eager to gear in with it.

Mr. Ainsworth made numerous contacts with individual industrial plants in the states visited. He spoke before the safety engineers' societies in Los Angeles and San Francisco, before the safety inspectors of the California Industrial Commission and the Illinois Department of Labor, before the annual conference of the Secretaries of the Chambers of Commerce and Managers of Trade Associations of the Pacific Coast region, before the Western Aircraft Standards Committee, and similar groups. He made contacts with the Pacific Coast Building Officials Conference of America, one of the important groups which had been invited to take part in the Building Code program, and which has since sent a staff man to meet with the Building Code Correlating Committee here in New York.

I should like to add here that it isn't just on the Pacific Coast that the ASA is missing opportunities. It's in the mountain states, in the industrial south, in the middle west, in the New England States. In fact all over the country. It is all very well to know that we are doing a good

technical job; but that job is of full value only insofar as it is put to use by industry.

Also the ASA will never reach the fulfillment of its mission until each one of its member organizations assumes full responsibility for insuring that its own members are thoroughly acquainted with the work of the ASA. The trade, technical, and governmental groups that together make up the Federation known as the American Standards Association might be considered as analogous to the links of a chain. The strength of the chain as a whole is entirely dependent upon the strength of each link. The value of the Association as an integrating force, therefore, is very much dependent upon the efforts which may be exerted by each of its members in making the work of the organization thoroughly known in the United States.

I want to make just one prediction this afternoon—that the ASA will never reach the fulfillment of its mission until it is able to have members of its staff travel in every state of the union every year talking to industry, to state and city governments, and to others—really doing the job which we were set up to do.

If this bigger job is not done by us it will be done by government as is the case in many foreign countries. Why haven't we done this bigger job in the past? Largely a matter of finances. Every year we are patted on the back for our fine technical work. We are told to hurry up a bit with this project or that. We are complimented

on how much we have accomplished on so small a budget. What I cannot help thinking today is that the time has come when a bigger job desperately needs doing. Will the necessary financial support be forthcoming?

In the national defense program especially, we have not done half of what we should have done. As you are aware, the lack of adequate national standards was a serious handicap to the industrial program of this country in 1917-18. This led directly to the organization of this Association which now has the cooperation of more than five hundred national industrial and technical organizations and has had 20 years of experience in standardization work. Today we have the machinery for preventing bottlenecks in production which we did not have in 1918. The British and German governments have made far more extensive use of their national standardizing bodies than the United States Government has made of the ASA. The need of unified standards, ac-

ceptable to industry and Government alike, is well illustrated by the constructive suggestions we have received from manufacturers all over the country.

We need to speed up work on the ASA undertakings most urgently required for defense—the work on quality control that has been requested by the War Department, the work on Tool Steels, on Screw Threads, on Bolts and Nuts and Wrench Head Openings, on Machine Pins, on Wire and Sheet Metal Gages, on Fits, on safety codes to protect labor that is being thrown into defense production as well as the routine work which often sadly lags.

Gentlemen, we are still, as in the past, confronted with a great opportunity for service which we are fulfilling only in part. The prospect while disappointing is not hopeless. We are still among the foothills, we still have the heights of complete usefulness to scale. It is my hope that the ASA may play its proper part during these troubled times.

## Committees Show Active Year On Standardization Projects

**A**S chairman of the Standards Council it is my duty and pleasure to report to you progress during the past twelve months on new standards, new jobs, and revisions of existing standards.

At present the Standards Council has no less than 151 active standardization projects to supervise. Checking back over the books I find that in the past 12 months we have approved 73 standards. This means that 73 projects had to be reviewed by your Standards Council members and a letter ballot vote cast for or against the standard in each case. Thirteen of the standards approved are new, bringing the total number of American Standards now on the books to 413. The others are revisions of American Standards previously approved. May I say here that keeping standards up to date through frequent revision is one of the most important phases of ASA work.

Again turning to facts and figures for the 12 months just past, I find that we have authorized the undertaking of four new standardization projects: Safety Code for Quarry Operations; Performance Requirements for Protective Occupational Footwear; Safety Standards for House-

**Standards Council Reviews and Approves 73 Standards; Authorizes Six New Projects**

by

**R. P. Anderson**

*Chairman, ASA Standards Council*

hold Ladders; Safety Standards for General Industrial Stairs. Requests for two other projects have come to us, from the War Department and from the American Society of Tool Engineers. One is to cover the Application of Statistical Methods to Quality Control of Materials and Manufactured Products. The other is a request



for the Classification of Tool Steels to aid in selection of the proper steel for various uses. Both of these are important to the Defense Program.

The Safety Code for Quarry Operations is to cover safe practice of workers in quarry, strip, and open-pit mining. Because of the accident hazard in this type of mining, many states have adopted their own regulations for quarry operations, and one of the aims of this work is to provide a model code which will tend to coordinate the many state and city codes now in use.

The project on safety shoes is important because of the wide application of these shoes in many industries. They are worn to protect against puncture; to resist heat, acid, and other chemicals; to insulate against electricity; to protect against falling objects; to prevent slipping on wet or oily surfaces; and so forth. Lack of adequate specifications and performance requirements for such shoes has made it difficult in the past to make an intelligent choice from the many brands available. The intent is to develop performance requirements and methods of test for protection features of safety shoes so that buyer and wearer can know just what the shoe will stand.

#### Work Done

Among the standards approved this year are many specifications for materials, some important safety codes, a dozen gas appliance standards, several important standards in the mechanical and electrical fields, etc. Time here today does not permit more than a quick glance at a few of the jobs.

One new standard of very wide interest is the American Standard Rules for Rounding Off Numerical Values. It sets forth a simple and effective method of rounding numbers, pointing out a common error in the practice followed by most of our schools: that is, of rounding off to the next higher figure. Developed by the same committee that did the inch-millimeter conversion tables, it complements and increases the value of that important job.

#### Photography

One of the most active fields of work this year has been in the development of standards for photographic supplies and equipment. Early in the year a photographic manufacturers group was formed which is now a Member-Body of the American Standards Association. A committee composed of this manufacturers group, the Optical Society of America, and a number of other organizations including governmental groups—a total of 50 voting members—have laid the groundwork for a project which will cover prac-



R. P. Anderson

tically all phases of picture making with the exception of cinematography.

First standard in this field to be completed for public trial is a proposed Method for Determining the Photographic Speed of Roll Film, Film Packs, and Miniature Camera Films. This has just been compiled by the committee and is being published for a year's trial and criticism before final approval as an American Standard. Several other standards are almost ready for publication: one for Printing Equipment, one for Projection Equipment, one for Lantern Slide Projectors, and two for Film Pack Dimensions.

The main objectives of this photography work are: to develop a system of nomenclature and terminology which will eliminate the present confusion caused by the use of the same words and phrases with different meanings; to agree on uniform methods of expressing characteristics of sensitive materials; to agree on dimensional standards to bring about better interchangeability; and to define tests and methods of measurement which at present are not well known or not uniformly used.

#### Gas Appliances

Again among the standards approved this year is a series of 13 for gas appliances and accessories—12 being revisions of standards already ap-

Six new projects of wide interest were undertaken by the ASA during the past twelve months:

Safety Standards for General Industrial Stairs  
Safety Standards for Household Ladders  
Safety Code for Quarry Operations  
Performance Requirements for Protective Occupational Footwear  
Classification of Materials for Tools, Fixtures and Gages  
Application of Statistical Methods to Quality Control of Material and Manufactured Products.

proved, and one, a new standard in the field.

I should like here to mention the importance of this group of standards. Fully 90 per cent of the gas appliances sold in this country now conform to American Standards which cover every type of appliance found in the well-equipped home. Due to the large-scale research development and testing work which has gone into this project, more improvements have been made in domestic gas appliances in the past 10 years than in the previous 40.

### Electrical

The 1940 National Electrical Code has been completely revised during the year. The new edition represents many advantages in safeguarding life and property as well as recognizing several important new developments in the application of electricity to heating and lighting. For example, it authorizes the use of new compounds which insulate safely at higher temperatures, thus allowing higher loads. A new wiring method which utilizes the hollow spaces of steel floor construction for raceways is also recognized. Adoption of these new provisions means much to the office and apartment house owners who will now be able to increase their electrical loads materially without adding to the number of circuits.

During the year work on the National Electrical Safety Code has included approval of Part 5—Safety Rules for Radio Installation. Part 1—Safety Rules for the Installation and Maintenance of Electrical Supply Stations has recently been re-drafted and submitted to the Standards Council for approval. Part 3—Safety Rules for Installation and Maintenance of Electrical Utilization Equipment and Part 6—Electric Fences have also been submitted, but are still under consideration by the Electrical Standards Committee.

Another important revision in the electrical field is the 1940 Standard for Rubber Insulated

Tree Wire. This edition will probably have wider popular use than earlier ones as it includes complete requirements rather than merely specifications for the wire coverings. Seven standards for various types of bare copper wire have also been approved this year and to simplify future work on the subject, five former projects have been consolidated into one.

A very important new group of standards for Regulators, Transformers and Reactors has been completed during the year and is now out for a period of trial and criticism before final approval. The new work combines in a single volume the most complete information that has yet been available on the rating and behavior of induction apparatus.

### Building

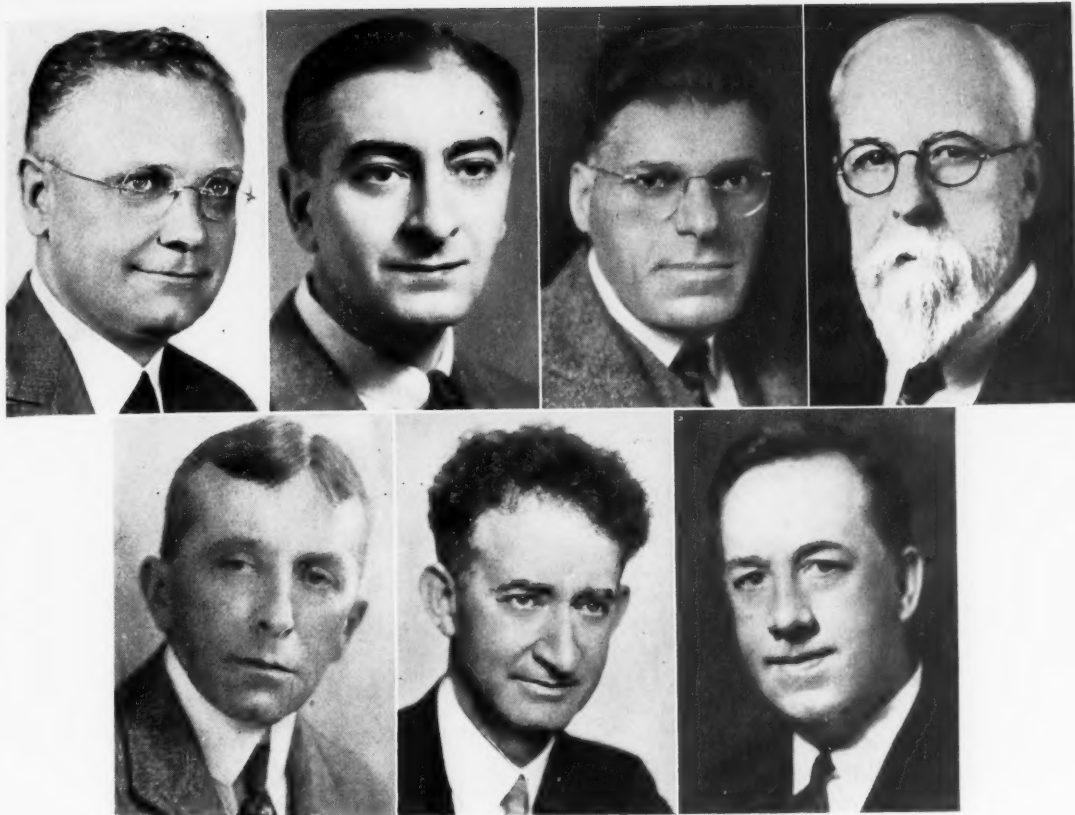
In the building field fifteen committees are at work on standards, several of which are now nearing completion. In this work ASA committees are studying all existing material in the field as well as obtaining much new technical data. Building code requirements dealing as they do with building materials and processes are an important factor in construction costs. The need for coordinating the requirements of the many building codes now in use, and of keeping them abreast of changing conditions and scientific developments makes the development of these standards very important.

A new edition of the American Standard Building Exits Code was completed in January. This includes standards for stairways, fire escapes, doors, and other exit facilities in schools, factories, and public buildings.

Probably you will remember that we have another committee in the building field working on coordination of dimensions of building materials and supplies. This committee has during the year presented some very fine reports. Seven subcommittees are working under it on various phases of the coordination problem. For example, one subcommittee is studying wood doors and windows; another, concrete blocks; and another masonry walls.

### Safety and Occupational Disease Codes

The committee on toxic dusts and gases has been making real progress during the year. Four standards covering allowable concentrations of carbon monoxide, benzene, hydrogen sulfide, and carbon disulfide are drafted, and approved by the committee and are ready to present to the Standards Council. Draft standards for the toxic thresholds of two other substances—trichlor ethylene and nitrogen oxides—have also been completed and will be presented to the committee at its next meeting. Subcommittees are actively en-



### Chairmen of ASA Correlating Committees

*Above (left to right):* Alfred Iddles—Mechanical; Max Gertz—Consumer; A. M. Wolf—Highway Traffic; Rudolph P. Miller—Building.

*Below:* C. R. Harte—Electrical; Dan Harrington—Mining; Walter S. Paine—Safety.

gaged in the development of standards for ten other toxic substances:

- Carbon tetrachloride
- Tetrachlor ethane
- Tetrachlor ethylene
- Chromic acid
- Lead
- Mercury
- Formaldehyde
- Toluol
- Methanol
- Hydrofluoric acid

The importance of this work cannot be overestimated particularly in view of the present Defense Program. The preparation of war materials calls for a much wider use of certain toxic substances than previously.

At the time of the preparation of this report a new safety code on accident prevention signs had been submitted to the American Standards

Association for approval. This code will be of considerable value to industry inasmuch as it provides uniform specifications for the design, application, and use of warning signs or symbols.

### Mechanical Standards

During the year we have approved eleven standards in the mechanical field. Included among these are several for cast-iron pipe, for steel pipe flanges and fittings, revisions of two specifications for Electric-Fusion-Welded Steel Pipe, and a new standard for Backlash for General Purpose Spur Gearing. Work is also being carried forward on revision of the standards for Pipe Thread and for Cylindrical Fits and the establishment of a standard for Screw Thread Gaging. The committee on Small Tools and Machine Tool Elements is working on more than a dozen projects.

Probably the most important standard in the mechanical field approved during the year is the one on Twist Drills with Straight Shanks. These

drills are used widely throughout the mechanical industries from automobile plants down to the smallest repair shop. This standard has increased significance right now in view of national defense needs. Defense requirements have, of course, highlighted almost all standardization work in the mechanical field.

One of the problems during the coming year will be to speed up work on the ASA undertakings most urgently required for defense—for example, on the project on quality control requested by the War Department and the work on tool steels requested by the American Society of Tool Engineers. We will also have to speed up the projects on screw threads; on bolts, nuts, and wrench openings; on machine pins; on wire and sheet metal gages; on cylindrical fits for machine parts; and also on some of the safety codes which will be needed to protect the inexperienced labor that is being turned into defense production.

Thirteen new American Standards were approved between the dates of the 1939 and 1940 Annual Meetings of the American Standards Association. These 13 new standards in many fields of industrial standardization activity are listed below:

- Computation of Strength and Thickness of Cast-Iron Pipe (A21.1-1939)
- Specifications for Cast-Iron Pit Cast Pipe for Water or Other Liquids (A21.2-1939)
- Specifications for Cement Mortar Lining for Cast-Iron Pipe and Fittings (A21.4-1939)
- Twist Drills, Straight Shank (B5.12-1940)
- Backlash for General Purpose Spur Gearing (B6.3-1940)
- Specifications for Medium-Hard-Drawn Copper Wire (H4.3-1940)
- Specifications for Hot-Rolled Copper Rods for Electrical Purposes (H4.7-1940)
- Method of Test for Unsulfonated Residue of Plant Spray Oils (Z11.41-1940)
- Specifications for Stoddard Solvent (Z11.42-1940)
- Safety Code for the Prevention of Dust Explosions in the Manufacture of Aluminum Bronze Powder (Z12.11-1940)
- Approval Requirements for Hotel and Restaurant Deep Fat Fryers (Z21.27-1940)
- Specifications for Sieves for Testing Purposes (Z23.1-1939)
- Rules for Rounding Off Numerical Values (Z25.1-1940)

Revisions approved since the last annual meeting bring 60 other standards up-to-date or raise them to the status of American Standards.

## Consumer Goods

As you know, the American Standards Association has underway a substantial program of standards for products sold at retail and used by individuals and families in everyday life. The gas-appliance standards which I mentioned earlier this afternoon are a good example of consumer standardization work.

During the year a good deal of progress has been made on the standardization of sizes for children's clothing—a project with which I believe most of you are familiar. The committee has worked out a proposed series of average body measurements for boys in the age range from kindergarten to junior high school and this proposed standard is now out to letter ballot of the committee. Once this basic standard has been approved, various groups of clothing manufacturers will be asked to work out standards for the fit of underwear, suits, blouses, and other garments. A group of models has already been made up in accordance with the proposed measurements that the committee is working on.

In passing I would also like to mention the project on Bedding and Upholstery. The importance of this job can not be over-estimated when we consider that 37 states have bedding and upholstery requirements and that many of these have conflicting regulations.

Another committee is working on methods of test and other standards for household refrigerators. For example, one of the first jobs of this committee will be a revision of the American Standard Method for Testing Refrigerators Using Ice.

Only a few weeks ago the American Standards Association received a request from the manufacturers for development of an American Standard for Domestic Flatirons.

As was brought out in the TNEC hearings last spring at which the American Standards Association provided testimony on the value of standards in eliminating state trade barriers, rapid progress in this consumer work is important.

An ASA committee is working out standard principles on which public "certifications," "listings," and "endorsements" may be based. This move to at last "certify the certifiers" should do much to increase the acceptance of such endorsements on the part of the public according to the Association of Consulting Chemists and Chemical Engineers who are taking leadership in the work.

The Institute of Standards, which as many of you know has been started under the supervision of the McCall Publishing Company, has expressed the intention of using American Standards wherever possible as the basis for its approvals and is also promoting the development of additional standards through the American Standards Association.



The methods by which American Standards are approved have been worked out through many years of experience in solving difficult technical problems that involve a number of groups. Two documents outlining these methods of work are available from the American Standards Association. One is the formal Procedure approved by the Standards Council as a working document of the ASA and published in the *Year Book* as well as in separate pamphlet form.

The second has grown naturally out of committee experience in the many years that the ASA has been in operation. In it detailed suggestions are given as to the organization and selection of committee members, planning the work, organizing and carrying on subcommittee work, and preparing the draft standards which finally come before the Standards Council for approval.

Copies of both the Procedure and this second document, "The Organization and Work of ASA Sectional Committees" (PR 27), may be obtained free of charge from the American Standards Association, 29 West 39 Street, New York City.

### International

Despite the war situation in Europe, the American Standards Association has continued its support of the International Electrotechnical Commission and also of the International Standards Association. While much of the international work is at a standstill and the future situation is uncertain, we are maintaining contacts with a number of foreign standardizing bodies and continuing to obtain copies of their standards wherever possible. So far, the ASA has encountered no great difficulty in sending and receiving communications from these groups abroad and its file of foreign standards has been invaluable to American firms filling orders for export. Even the British Purchasing Commission has found it necessary to call on the ASA on numerous occasions for standards and specifications which they did not have themselves. Recently the American Standards Association has received copies of the second edition of the International Electrotechni-

cal Vocabulary which we are now distributing in this country.

### In Review

I believe that the technical work this year shows a sustained interest on the part of industry and government in the ASA program. I believe we should feel proud of the contribution being made by trade associations, companies, and other groups throughout the United States in offering the services of their staff members on ASA committees so that the work can be effectively carried out. On behalf of the Standards Council of the American Standards Association and industry as a whole, I should like to thank the committee men, the organizations they represent, the sponsors of individual projects, and members-at-large for the very constructive service which they are rendering.

### Chicago Studies Plan For Standard Superblock

The Chicago Plan Commission is developing a new set of standards toward which the city can work during coming years in making plans for zoning. The ideal to which it is committed is a superblock plan. Chairman George T. Horton and Chief Engineer Hugh E. Young, who presented their ideas to the committee which is working on the standards, said the superblock unit should be large enough to form an elementary school district—probably 40 to 160 acres. Through traffic and commercial tenancy would be confined to boundary streets, and every interior street would be blocked off by a dead end. The result claimed for such a plan is a quiet neighborhood inside the superblock, with a community spirit which could not develop in a less closely integrated unit.

The goal is to draw up superblock plans fitted to each appropriate district in the city, then hold future development to conformity with these plans.

### Handbook Gives Cotton Standards

A Handbook for Cotton Classers, just issued by the U. S. Department of Agriculture, includes the Government standards for grades of cotton and linters, as well as information to help in the use of the standards and staple types, and suggestions for students of cotton classing. It also includes the text of the United States cotton Standards Act.

Copies are available from the Superintendent of Documents, Washington, D. C., at 10 cents each.

# Defense Needs Spell Speed-Up For National Standards

**T**HE National Defense Program, moving steadily toward greater coordination of defense-production standards, is already having an important direct effect upon the activities of the American Standards Association. The inevitable result is to add to the pressure of ASA work.

This was to be expected, since under present-day conditions standards have become a key factor in every program of large-scale production.

The integration of the Government's purchasing program and industry's manufacturing program into a smooth flow of production is an enormous undertaking. Shortcomings in the standards which control the products ordered, or in the manufacturers' methods in working to those standards, result in bottlenecks which cut down the flow of goods.

Some of these bottlenecks are already apparent, and where standards prepared under the methods of the American Standards Association can help in removing the most pressing of them, action has been speeded by existing ASA committees or through new projects started at the request of the War Department or on the initiative of industry.

## ASA Work Needed in the Defense Program

1. *Statistical Methods of Quality Control in Quantity Production.* The War Department has requested the American Standards Association to develop a standards project on the Application of Statistical Methods to Quality Control of Materials and of Manufactured Products.

During the past few years, new methods based upon the use of statistics have been coming into use as controls in quantity production. In all mass production it is necessary to control with specified accuracy the quality of materials, dimensions of parts, working tolerances and allowances, and other such problems, in order to ensure satisfaction in the finished product.

The Bell Telephone System has done pioneer

**Demands for new standards and need of revisions to bring existing standards up-to-date place heavy strain on ASA machinery**

by

**P. G. Agnew**

*Secretary, American Standards Association*

work in the development of these newer methods<sup>1</sup> and is now making extensive use of them to control the quality of thousands of manufactured items. Other American companies are also applying these methods successfully to products as varied as carpets, fabrics, steel, coal, and electric lamps.<sup>2</sup>

Certain British firms have adopted these methods and the British Standards Institution has published a long report about them.<sup>3</sup>

The War Department's request is based on the idea that the principles of statistical control of quality may be used with great benefit by the arsenals, in the inspection of supplies delivered to the government under defense contracts, and in the

<sup>1</sup> See *Economic Quality Control of Manufactured Product*, by Walter A. Shewhart, Van Nostrand, New York, 1931; and *Statistical Method from the Viewpoint of Quality Control*, by Walter A. Shewhart, The Graduate School, Department of Agriculture, \$2.50.

<sup>2</sup> For a discussion of these statistical methods, see "How Statistics Help the Engineer Control Quality of Product," by John Gaillard, *Industrial Standardization*, May, 1940, p. 109.

<sup>3</sup> *Application of Statistical Methods to Industrial Standardization and Quality Control*, by E. S. Pearson, D.Sc., British Standards Institution, BSS 600-1935, \$1.85.

plants of numerous manufacturing contractors and sub-contractors.

A special committee under the chairmanship of Dr. R. L. Jones of the Bell Telephone Laboratories met November 19 to consider the proposal and has recommended that the project be undertaken by the American Standards Association. Other members of this special committee are:

L. F. Adams, National Electrical Manufacturers Association

Harold F. Dodge, Bell Telephone Laboratories, Inc.

Dr. John Johnston, U. S. Steel Corporation

Lt. Col. A. B. Johnson, Ordnance Department, U. S. Army; member of Defense Commission's Machine Tool Priorities Advisory Committee

John S. Tawresey, SKF Industries, Inc.

2. *Classification of Tool Steels.* The rapid and extensive increase in cutting tools resulting from the defense program has brought into sharp focus the fact that there are now on the market nearly 1,000 brands of tool steels. This makes it difficult to select the right steel for a tool to do a particular type of cutting job. Selection of the wrong steel results in less satisfactory work, sacrifice of the tool life, and unsatisfactory wearing qualities, among other disadvantages.

This situation has placed a burden upon the manufacturers of tools and upon the users of the tools in stocking and keeping track of numerous brands, many of which are identical or nearly so.

Some work has already been done by various organizations in classifying tool steel by classes, or uses, rather than by trade names. Now, in view of the vital importance of all types of tools in defense production, the American Society of Tool Engineers has asked the American Standards Association to start a project which would correlate these activities and produce an American Standard classification acceptable to all. It is proposed that the undertaking shall cover other materials used for cutting tools, such as cemented carbides and Stellite, as well as steels.

3. *Screw Threads.* The stepping up of accuracy in many types of equipment used in modern warfare as, for example, airplane engines, has made necessary the re-study of many problems in the complicated situation of screw threads.

A liaison arrangement has been established between the American Standards Association and the Interdepartmental Screw Thread Committee of the Government, which is made up of representatives of the War, Navy, and Commerce Departments. Representatives of four ASA committees working on problems involving screw

thread standardization have been named as liaison members of the ISTC as follows:

Earle Buckingham, professor of mechanical engineering, Massachusetts Institute of Technology; secretary, ASA Committee on Standardization and Unification of Screw Threads (B1)

J. H. Edmonds, general manager, Lebanon Plant, Bethlehem Steel Company; member, ASA Committee on Bolt, Nut and Rivet Proportions (B18)

Charles C. Winter, Winter Bros. Company; member of ASA Committee on Screw Threads (B1)

A. M. Houser, standardization engineer, Crane Company; member ASA Committee on Pipe Thread (B2)

The purpose of the ISTC has been described by the Secretary of Commerce as "to safeguard the interests of the Federal Government in the specification, purchase, and inspection of threaded products." Its work covers standards for screw threads, gages, dies, and taps, and bolts, nuts, screws, and other threaded parts. The four committees of the ASA whose work will be affected by the liaison arrangement are:

Screw Threads (B1)

Pipe Thread (B2)

Small Tools and Machine Tool Elements (B5)

Bolt, Nut and Rivet Proportions (B18)

The first document issued under the auspices of the ISTC was a pamphlet entitled *Screw Thread Standards for Federal Services, 1939*, published as Handbook H25, of the National Bureau of Standards.

4. *Standard Method of Gaging Screw Threads.* The specification of fits between threaded parts to be used for different kinds of products, and proposals for different methods of gaging have led to extensive discussions and controversies during the last few years. This applies particularly to the limits applicable in manufacturing nuts. This situation has been met by extremely active work on the part of the ASA subcommittee on Screw Thread Gaging, and by the Interdepartmental Screw Thread Committee.

Apparently, a solution satisfactory to all parties concerned is now nearing completion in the ASA committee. This solution involves the specification of the amount of truncation of the Not-Go gage and proposes to deal with commercial nuts as a separate problem.

5. *Machine Pins.* The War Department has asked the American Standards Association to renew the work of its committee on Machine Pins,

especially taper pins. This apparently insignificant item is a source of inconvenience and confusion. One of the most confusing elements is a conflict in usage between the producer and the user groups, including the Government, as to whether the size of a taper pin shall be designated by the diameter of the large end or of the small end.

6. *Twist Drills.* It is hoped that the work on Machine Pins, just mentioned, may be brought to a conclusion more quickly than a similar but more important undertaking that was completed by the ASA earlier in the year. This was the new series of 116 standard drill diameters ranging from .0156 to .50 inch.

There had been a stalemate for years between the mass-production user industries and the manufacturers on twist drill sizes. The user groups wanted to make drastic reduction in the number of sizes which they had to carry and at the same time to introduce longer drills for greater economy in modern multiple-drill machines. The manufacturers, on the contrary, were fearful lest these drastic changes might interfere with their present trade distribution to small miscellaneous users through hardware stores and other channels. The stalemate had lasted for years. A successful solution was facilitated by the recent speed-up in industry.

An important part of the compromise which brought about agreement on the new standard was the inclusion of 158 additional "manufactured sizes" of drills. It is expected that in the course of time the manufacturers will have to stock only the American Standard sizes.

7. *Bolts and Nuts—Wrench Openings.* A revision of the American Standard for Wrench-Head Bolts and Nuts and Wrench Openings is before the ASA for final approval. The completion of this revision is of great interest to the Government services, particularly since the Interdepartmental Screw Thread Committee had to bring the specifications for use by the Government services up-to-date. The ISTC has asked the ASA to expedite approval and publication of this standard.

As an illustration of how rapidly matters of this kind move under emergency conditions, it is interesting to note that proposals are already being made for still further simplification of the line of bolt head sizes and wrench openings given in the new standard. This applies especially to the diversity between the widths across flats of regular bolt heads and cap screw heads.

Special attention is also being given now to the requirements of the aircraft and aircraft engine industry in this field.

It is of particular interest at this time that the Standards Association of Australia has adopted the present American Standards for screw threads and for bolt and nut heads as one of its emergency standards to unify supplies to the Australian Government.

8. *Wire and Sheet Metal Gages.* The extensive use of different gages and methods of designating the wire diameters and the sheet thicknesses has been a source of confusion and misunderstanding in industry for more than a generation. It presents a typical illustration of how such a situ-



A liaison arrangement brings ASA committees on bolts and nuts, screw threads, pipe threads, and small tools and machine tool elements into close cooperation with the Interdepartmental Screw Thread Committee of the Federal Government. The work of this committee will affect much of the Government buying of these products. The machine shown here is used in making large and heavy bolts and nuts.

Photo by James Sawders



ation has sharpened up and has been thrown into striking relief by increased industrial activities resulting from the Defense Program. New firms entering a field, and new personnel not used to localized customs and habits make more acute the need of national standards.

This situation has brought to life an old ASA undertaking on the subject which had shown little or no activity for a long time.

Under this pressure, an ASA subcommittee on the thickness of sheet metals has now formulated, in draft form, a standard practice in this field. This draft standard proposes the abolition of all gage numbers and the use, instead, of decimal fractions of an inch. It goes further and recommends a series of thicknesses taken from the American Standard series of Preferred Numbers.

9. *Standard System of Fits.* The Defense Program has made urgent the revision of the existing standard for cylindrical fits. Curiously enough, all of the other highly industrialized countries, including Germany and Great Britain, have gone very much further in the development and use of a national standard system of fits than is the case in this country.

Our industries thus lack a very definite advantage which accrues to the industries of the other countries. There not being an adequate national system of fits, in this country, each new design, and each new contract involving designs new to the manufacturer, brings a special problem in fits which must be considered by itself, instead of being solved in a routine manner.

The importance of this situation is obvious when one considers that a single government contract may involve hundreds of subcontractors. Thus, each design, whether it be new, or only new to the parts manufacturer, becomes a problem in itself; while if all of the manufacturers were accustomed to the use of a national system of fits the great majority of such designs would be merely additional examples of the class, A, B, C, or D fits to which they are already accustomed to work.

This condition has made it necessary for the ASA to take up the matter of a fundamental revision of the present inadequate standard. A great deal of data has been accumulated, including especially complete information on foreign practice, and this is being put before the ASA Committee on Fits.

10. *Safety for Workers in the Defense Program.* Defense work brings numerous companies and large numbers of employees into contact with operations with which they are unfamiliar, and intensifies the problem of providing for safe operation. As a protection to all concerned, the Walsh Healy Act requires that the



Courtesy General Electric Co.

The problem of standardizing fits between cylindrical parts is one which is now more urgent than ever due to the requirements of the defense program. Standard gage blocks and limit gages (such as shown in this picture) are the basic tools for securing the accuracy and interchangeability indispensable in the national coordination of production.

safety of labor in the manufacture of the products called for by the contract entered into with the government be assured through the establishment of adequate accident prevention programs.

As a corollary to such requirements, the Federal Government issues publications advising industries on how to overcome accident hazards, and in these publications bases its engineering recommendations on American Standard Safety Codes. Some of the codes referred to are the Code for Pressure Piping (B31.1-1935), the Code for Mechanical Power-Transmission Apparatus (B15-1937), the Code for the Protection of Head, Eyes, and Respiratory Organs (Z2-1938), American Standard Method of Compiling Industrial Injury Rates (Z16.1-1937), and the American Recommended Practice for Safety in the Construction Industry (A10-1938).

Fortunately, more than 50 such codes are available, although new and intensified operations make revisions of a number of them necessary. In one case recently, an organization which was interested in using one of the codes found it of no value because the latest revision was approved in 1925. A recent trip by a staff member to the West Coast brought many comments on such situations and recommendations from

a variety of organizations that a definite procedure should be set up by the ASA for more frequent review of safety codes and more frequent revisions.

11. *Codes for the Prevention of Industrial Diseases.* The industrial speed-up involves the extensive use of many materials that are dangerous to health. Many more of these are being used, and used much more extensively than under ordinary conditions. And, again, they will be used by many firms and by personnel unaccustomed to handling these materials. Fortunately, the ASA already has a committee working to determine the danger limits for each toxic material. This committee contains more well-known authorities on the subject than have ever been brought together before.

The technical work on codes for the following substances has been completed and the work is ready for official approval and promulgation: carbon monoxide, benzene, hydrogen sulfide, and carbon disulfide.

Work is actively under way on codes for the following additional substances:

- Carbon tetrachloride
- Chromic acid
- Formaldehyde
- Hydrofluoric acid
- Lead
- Mercury
- Methanol
- Nitrogen oxides
- Tetrachlor ethane
- Tetrachlor ethylene
- Trichlor ethylene
- Toluol

Preliminary drafts have already been prepared for nitrogen oxides and tetrachlor ethane.

12. *Government Specifications.* Partly as a result of the needs of the Defense Program, and partly as a result of criticisms by industry of troublesome differences in specifications used by the different bureaus and departments, the Government has plans under way for bringing all government specifications into closer accord as has already been done in the case of some 1300 specifications which have been unified under the authority of the Federal Specifications Executive Committee.

This Federal Specifications work is attached to the Procurement Division of the Treasury Department. To help bring this work into closer accord with industrial practice, the Treasury Department has recently affiliated with the American Standards Association as a Member-Body.

In connection with these plans and with many other matters having to do with standards in the defense work, members of the ASA staff are

being called to Washington with increasing frequency. An additional load has also been thrown on the ASA engineering representative in Washington. There is need of a full-time representative for the defense work alone.

13. *ASA Special Library Service.* The defense work, the changes in industry resulting from it, the increased demand for information regarding foreign as well as American Standards resulting from changes in international trade caused by the war, and the work of the British Purchasing Commission, have together resulted in practically doubling the demand upon the ASA Library Service.

An especially interesting aspect of this item is that the ASA now gets many inquiries for foreign standards to be used by American firms for products formerly made abroad. For example, there are many calls for German standards on the part of firms now exporting to South America in cases in which South American interests are turning to this country for products formerly purchased in Europe.

Calls for such standards often exhaust the limited stock which the ASA has facilities for handling long before all the requests for copies are filled. In the case of an important foreign standard, the ASA Library frequently finds it necessary to furnish photostat copies from the ASA file copy while waiting for repeat orders to be filled from abroad.

Even the British Purchasing Commission frequently calls on the ASA for such services including copies of British, French, and Australian standards.

14. *South American Relations.* The South American market is becoming more and more interested in standards as a basis of purchase. Word has just been received that a new national standardizing body has been organized in Brazil. This follows an informal organization of laboratories and others interested in standards which has been operating for some time. Apparently this new Brazilian body is organized along somewhat the same general lines as the national standardizing body in Argentina (IRAN) which has been operating now for some years. The British Standards Institution has for several years maintained a full-time representative in Buenos Aires and Germany has a different but equivalent arrangement.

In 1938 the American Chamber of Commerce in Buenos Aires requested that a full-time representative of the ASA be stationed in that city. However, trade relations between the two countries became complicated and the plan was dropped. Nevertheless the American Chamber in Buenos Aires still wishes the ASA to provide special services in the way of assembling and arranging

for the forwarding of standards, publications pertaining to standards, and related material, both to the Chamber and to the Argentine standardizing body. Although war conditions have sharpened the demand for such a service the ASA has been able to meet this demand only partly. Here is a place where a very small investment would enable the American Standards Association to perform a much-needed service in trade and in general international relations.

There can be little doubt that war conditions have hastened the development of the new body in Brazil. Since trade dislocations and the changing of sources of supply always sharpen the need for standards, there can be little doubt that the same need of service to Brazil will develop just as has been the case in Argentina.

15. *Translation of Standards.* The changing conditions just mentioned have brought into relief the increasing need for translation of specifications into Spanish, Portuguese, and other languages for the use of American exporting firms in their foreign markets. For example, the National Electrical Manufacturers Association recently called attention of the ASA to a group of American Standards in the electrical field which

would be useful to their members in the development of their foreign trade.

The British and Germans have always done much more of this than has been done in this country. For example, the British Standards Institution is even now working on a technical handbook in Spanish to tell prospective purchasers in South America what British industry has to offer.

As a matter of fact, something has been done along this line in a sporadic way in the United States from time to time, largely through the facilities of the Bureau of Foreign and Domestic Commerce and the National Bureau of Standards. Something has also been done through the enterprise of American technical and trade publications circulating abroad.

Recently there has been so much discussion of this subject of foreign translation of American Standards as a result of present international conditions that at its last meeting, the ASA Board of Directors gave serious consideration to the feasibility of providing a systematic arrangement for the translation of standards into foreign languages.

This whole question of furnishing translations of standards is one of how to finance the undertaking.

### What Can Be Done?

These demands for activities in new fields, for the expansion of existing work, and for increased activity on existing projects require increased staff and increased facilities all along the line. The more urgent needs include, for example:

More travel and field work on the part of the staff engineers

An engineer stationed in Washington to give full time to work on standards in the defense program

An increase in the engineering staff and in the supporting clerical force, not only to provide for more adequate support of committee activities, clerical service, preparation of data, etc., but also to help carry on that backlog of unfinished business now rapidly piling up through lack of adequate staff facilities

An increase in library staff and equipment to provide more adequate library services and more complete distribution of standards for the use of industry

Provision for translation of standards into foreign languages as an aid to foreign trade.

In addition, the suggestion has been made that a special abbreviated procedure might be set up for emergency standards for use only during the defense emergency, and the Committee on Procedure is giving the question preliminary study. The British Standards Institution is using this device very effectively in its War Emergency Specifications. Since such a procedure would call for much greater activity on the part of the staff, such an arrangement instead of alleviating the financial situation would add appreciably to the burden.

Such burdens coming to an organization whose total facilities are already loaded to the gun-wales can be satisfactorily met only by increased financial support. Neither industry nor government can afford to depend on an organization crippled through lack of personnel and lack of proper facilities to do the work being placed upon it.

Whether the American Standards Association will be able to carry on as a national coordinating agency for standards under changing conditions in which speed is becoming one of the prime necessities, will depend entirely upon whether industry provides the means to make an effective, efficient program possible.

## Research Data on Joints Used As Basis for Proposed Standard

Data from recent research at the National Bureau of Standards have served as the basis for recommendations for pressure ratings for soft-soldered joints in copper tubing in the proposed American Standard for Soldered-Joint Fittings. This proposed standard has recently been approved by the sectional committee, A40, and is now before the American Standards Association for approval.

The National Bureau of Standards' research covered the effect of temperature and time under load on the strength of joints in standard types of copper water tubing with wrought copper and cast brass fittings soldered with (50-50) tin-lead and (95-5) tin-antimony alloys.

In long-time tests (10,000 hours or more) under constant tensile loads at temperatures ranging from 85 degrees to 250 degrees F, the strength of joints soldered with tin-lead was about one-eighteenth of that obtained in short-time tests, the research showed. Joints soldered with tin-antimony had from one-fifth to one-seventh of the short-time strength, depending upon the temperature. Because of diffusion of copper into the solder, joints soldered with tin and tin alloys are not recommended for continuous use at temperatures above 250 degrees F, the National Bureau of Standards reports.

In the proposed American Standard for allowable pressure ratings for joints made with (50-

50) tin-lead solder have been set at values corresponding to about one-half of the maximum permissible stresses obtained at the National Bureau of Standards. The joints made with tin-antimony solder were stronger at all temperatures in this range than were the joints made with tin-lead solder.

Brass and copper water pipe with threaded fittings has been used for many years in plumbing services where the higher cost of copper as compared with iron and steel was considered to be justified by its greater corrosion resistance. The less costly thin-walled tubing, which could not be threaded, was used with compression-type fittings but did not come into extensive use for general domestic plumbing until the introduction, about 1930, of the sleeve-type fittings joined to the tubing with soft solders. Data were lacking on the strength of such joints, but the fittings were so designed that in short-time tensile tests the strength of the joint was generally equal to, or greater than, that of the tubing or fitting.

The full account of this research, part of which has led to the ratings set up in the proposed American Standard, has been published as Building Materials and Structures Report BMS58, copies of which can be obtained at ten cents each, from the Superintendent of Documents, Government Printing Office, Washington, D. C.

## Standard for Book Cloths Is Approved by ASA

A revised Commercial Standard to furnish a basis for understanding between buyer and seller in the selection of cloth for book binding has been accepted by cloth manufacturers, publishers, bookbinders, and others concerned, and has been given approval by the American Standards Association. The standard, developed under the procedure of the National Bureau of Standards, provides seven classifications of cloth, four for book cloths, and three for buckrams. The revision just approved clarifies and extends the standard for book cloths covered in the first edition issued in 1936.

Thread count, breaking strength, stripped cloth weight, methods of sampling, test conditions, and test methods are covered by the standard requirements to help in determining those characteristics

of book cloths not readily determined from visual inspection.

The wording of a uniform guarantee label, by which the seller may certify quality to the buyer, is recommended.

The revised Commercial Standard for Book Cloths, Buckrams, and Impregnated Fabrics for Bookbinding Purposes Except Library Bindings, CS 57-40, was submitted to the American Standards Association by the Institute of Book Cloth and Impregnated Fabrics Manufacturers. Copies are available from the ASA or from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents each.

The Industry has been materially helped by the adoption of these standards, according to Stewart Comeaux, secretary of the Institute. Recently these standards contributed to uniform specifications for text books in the nine States using the adoption method.



# Government and Industry Cooperate In ASTM Work on Copper Alloys

**C**ONTINUING the work which it initiated more than a year ago, ASTM Committee B-5 on Copper and Copper Alloys met in Washington recently under the direction of C. H. Greenall of the Bell Telephone Laboratories, chairman of the committee. The vice-chairmen are H. H. Stout, Jr., of Phelps Dodge Copper Products Corporation and J. J. Kanter of The Crane Company. C. H. Davis of the American Brass Company is secretary. This committee, under the regulations of the Society, is responsible for specifications for commercial copper and copper alloys in cast or wrought form for use as engineering materials in construction excluding products used primarily for electrical purposes. Active direction of the work of the committee is being carried on under an advisory committee, which includes the four officers of B-5, the chairmen of the several subcommittees, and representatives of the U. S. Army, the U. S. Navy, the Air Corps and the National Bureau of Standards.

At a dinner meeting of the Advisory Committee recently, Colonel J. W. Younger and Commander H. V. McCabe of the Army-Navy Munitions Board were special guests of Secretary-Treasurer C. L. Warwick of the Society who participated in the meetings. Colonel Younger and Commander McCabe both expressed their appreciation for the work that the American Society for Testing Materials, and Committee B-5 in particular, has done and is doing to cooperate with the federal agencies responsible for the procurement, without delay, of material for government needs.

## Helps National Preparedness

There are, as everyone knows, a large number of specification-writing bodies. Each seems to have its own pet requirements, which makes the manufacturer's problem a difficult one and increases costs to the consumer. Soon after the start of the present war, Committee B-5 realized that if it could blaze the way in coordinating specifications for copper base alloys it would not only be helping national preparedness by obtaining higher quality of products but would also simplify the producer's problems and reduce costs to consumers.

## ASTM and Government Standards Are Being Coordinated

As a start, the committee got in touch with the Federal Specifications Board and Army and Navy representatives and asked them to participate in a round-table discussion with committee members in order to coordinate the chemical compositions, physical properties, methods of tests, and tolerances, of the various Army, Navy, and Federal Specifications with corresponding ASTM specifications for the same material.

The committee has held a number of its meetings in Washington so that it would be easier for representatives of various interested Government departments to attend. That this has helped in securing active cooperation is evidenced by mentioning the various departments represented at this last meeting:

War Department—Assistant Secretary of War's Office;  
Ordnance Department;  
Air Corps  
Navy Department—Bureau of Ships;  
Bureau of Aeronautics  
Army and Navy Munitions Board—Standards Section  
National Bureau of Standards  
Federal Specifications Board

The need for coordinated standards and specifications for copper and copper alloys, cast or wrought, for use as engineering materials in construction has been stressed frequently during the past few months.

This article shows how the Government and industry are cooperating in the development of such specifications through Committee B-5 on Copper and Copper Alloys of the American Society for Testing Materials. It was prepared by the committee for simultaneous publication in the ASTM Bulletin and INDUSTRIAL STANDARDIZATION.

Subcommittee I on Copper Zinc Sheet and Strip, under the chairmanship of G. H. Harnden, has been active in working with the Frankford Arsenal on specifications for cartridge brass and gilding metal. This work has led to the revision and combination of two older ASTM specifications and the writing of three new ones.

Specifications for Cartridge Brass (B 19-29) and for Cartridge Brass Disks (B20-29) have been withdrawn and new Tentative Specifications for Cartridge Brass Sheet, Strip, and Disks (B 19-40 T) prepared and coordinated so that they are in agreement with Frankford Arsenal Specifications FXS-278 and FXS-279 covering this material. Specifications for Cartridge Brass Cartridge Case Cups (B 129-40 T), for Gilding Metal Sheet and Strip (B 130-40 T), and for Gilding Metal Bullet Jacket Cups (B 131-40 T) have been written and coordinated with Arsenal Specifications FXS-267, FXS-227, and FXS-281 respectively.

In the meetings during the year in which this work has been done there has been fine cooperation between the Government representatives and the other committee members and in all cases there was mutual adjustment of the specifications to bring them into agreement.

Subcommittee I also arranged with the Arsenal for round robin grain size tests on which work was recently completed in eight cooperating laboratories. Correlation of the data is now under way and when completed will be helpful to all concerned in enabling both ASTM and the Frankford Arsenal to arrive at satisfactory limits of grain size for cartridge brass and gilding metal cups.

Further work on the correlation of ASTM specifications with various Government and Federal specifications resulted in discussion on the following specifications at the most recent Washington meeting:—Navy Specification 47 B 2 INT; Federal Specification QQ-B-611a; and Army Specifications 57-160 and 57-171.

Subcommittee II on Copper-Tin Sheet and Strip, of which R. J. Wheeler is chairman, did not participate in the most recent Washington meeting but in previous ones has been working with Government representatives on the coordination of ASTM Specification for Phosphor Bronze Sheet and Strip (B 103-40) with Federal Specification QQ-B-746, Navy Specification 46 B 14e, Army Specification 57-167, and SAE Specification No. 77.

Subcommittee III on Copper-Nickel-Zinc Sheet and Strip, of which E. S. Bunn is chairman, last year drew up Specifications for Copper-Nickel-Zinc and Copper-Nickel Alloy Sheet and Strip (B 122-39 T) and has had under consideration during the current year minor revisions of these specifications. This subcommittee is also reviewing

specifications under its jurisdiction to coordinate them with corresponding Government specifications.

Subcommittee IV on Miscellaneous Copper-Base Sheet and Strip Alloys, of which L. A. Ward is chairman, discussed at length proposed revision of Federal Specification for Silicon Bronze (QQ-C-591 A) corresponding to ASTM Specifications B96, B97, B98, and B99. Further steps were also taken looking towards the correlation of ASTM Specifications for Beryllium-Copper Alloy Bars, Rods, Sheet, Strip, and Wire (B120-40T) with U. S. Army Air Corps Specification 11070-A, Navy Aeronautical Specification M-328, and SAE Aeronautical Materials Specification 4650 all for the same material. Work was also begun on new ASTM specifications for sheet copper with which Federal Specification QQ-C-501 will be correlated.

Subcommittee V on Miscellaneous Copper-Base Wire and Rod Alloys, under the chairmanship of W. H. Bassett, Jr., has been active in the coordination work and met with the other B-5 groups in Washington. This subcommittee has added two new alloys to the former Standard Specifications B21-29 on Naval Brass Rods for Structural Purposes, the specifications reverting to tentative and issued as B 21-40 T.

#### Prepare New Copper Rod Standards

Two new specifications have also been prepared covering Copper Rods, Bars, and Shapes (B 133-40 T) and Brass Wire (B 134-40 T). The subcommittee has proposed minor changes in Specifications for Copper-Silicon Alloy Rods, Bars, and Shapes (B 98-40). In line with the cooperation with Government departments, this subcommittee at the Washington meetings reviewed Army Specification for Special Copper Rod for Pressure Cylinders (57-154-1A) and advanced a number of suggestions to improve its provisions although the requirements for this material are so unique that no ASTM specification for it will be written.

Revisions in Specifications B 21 already referred to have coordinated it with Federal Specification QQ-B-636 and Navy Specification 46-B-6j. Specifications for Free Cutting Brass Rod for Use in Screw Machines (B16-29) are being reviewed in order to coordinate them with Federal Specification QQ-B-611A.

Six new tentative specifications are being prepared by this subcommittee; one for leaded high copper alloy rod; one for hardware bronze; one for phosphor bronze rod and wire; one for nickel silver rod and wire; another for aluminum bronze rod and wire to be coordinated with Federal Specification QQ-B-666 and AMS Specification 4630; and another for manganese bronze rod and wire similar to Federal Specification QQ-B-721A.

Subcommittee VI on Condenser Tubes of which

G. C. Holder is chairman has during the past year been working on minor revisions of Specifications for Copper and Copper-Alloy Seamless Condenser Tubes and Ferrule Stock (B 111-40 T) and has in course of preparation specifications for condenser tube plates.

Subcommittee VII on Copper or Deoxidized Copper Tubes, under the chairmanship of H. Y. Bassett, also met in Washington and proposed changes in several specifications under its jurisdiction to provide for a grade of pipe and tube suitable for welding. These changes were requested by the ASME Boiler Code Committee and affect specifications B 42, B 68, B 75, and B 88. Additional slight changes were also made in the last-named specification.

#### Write Tentative Standard for Brass Tubes

Subcommittee VIII on Copper Alloy Tubes for General Use, of which Alan Morris is chairman, has during the past year, written a new Tentative Specification for Miscellaneous Brass Tubes (B 135-40 T) and made minor revisions in other specifications under its jurisdiction.

Subcommittee IX on Copper-Base Alloy Forgings, of which J. J. Kanter is chairman, has under consideration minor revisions in the Specifications for Copper-Base Alloy Forging Rods, Bars, and Shapes, which have been found desirable as a result of experience obtained from the use of the present engineering requirements.

Subcommittee X on Copper-Base Alloys for Sand Castings met in Washington under the direction of its chairman, G. H. Clamer. This

committee has recently revised the specifications on Copper Base Alloys in Ingot Form for Sand Castings (B 30-40 T). Seven new specifications for copper-base alloy castings corresponding to the revised ingot specifications are now under consideration by this committee and will probably be adopted at the next annual meeting of the Society in June. Subcommittee X has been particularly active during the past year in coordinating ASTM specifications under its jurisdiction with corresponding Federal, Army, and Navy specifications. Among those specifications reviewed have been: Federal Specifications QQ-B-671a and QQ-B-731a; Navy Specifications 46-B-16B and ASTM Specifications B 7-39; and Federal Specifications QQ-B-726, Navy Specification 49 B 3d and ASTM Specification B 54-39.

#### Study Mercurous Nitrate Testing

Subcommittee XI on Methods of Test for Copper and Copper Alloys, under the chairmanship of A. J. Phillips, reviewed at the Washington meeting a proposed method for mercurous nitrate testing which has been developed in cooperation with the Frankford Arsenal. Also discussed was a proposed method for pin or expansion test of tubing and pipe.

Subcommittee XII on Publication of General Information, of which C. S. Cole is chairman, has under preparation a paper on the classification of wrought copper and copper-base alloys. It is also reconsidering the possibility of having all the ASTM specifications pertaining to copper-base alloys published as a separate compilation.

## AHEA Not to Join Standards Institute

The Executive Committee of the American Home Economics Association has announced that it has decided not to participate in the Institute of Standards.

"In a comment this week on the AHEA action," says *Business Week*, "the Institute makes clear that it will continue its organization plans, but says that 'a variety of deep-seated misunderstandings between business and the consumer movement still need to be cleared away.'"

The purpose of the Institute is to promulgate consumer-accepted standards for various kinds of goods and to provide an opportunity for manufacturer-members to have their products checked against those standards by regular commercial laboratories.

"At a meeting last month in Washington with

the three women's groups," *Business Week* explains, "Institute officials proposed that, until experience might dictate some other course, it would cooperate with consumer organizations only through existing agencies such as the American Standards Association and the National Consumer-Retailer Council. The three women's groups [the AHEA, the American Association of University Women, and the General Federation of Women's Clubs] would not now be asked to join the Institute, although individual leaders would be asked to help work out methods which would lead toward development of standards and labels.

"In view of this understanding, last week's announcement of the AHEA came as a surprise not only to McCall's but also to the other two women's groups....

"However, individual members of the various groups have since indicated their willingness to continue cooperation with the Institute."

# Brazil Organizes New Standards Association

A permanent standardization association is now being organized in Brazil, growing out of a private association of laboratories and other organizations interested in standard specifications and tests which has been operating for sometime.

The new association is to be known as the Associacao Brasileira de Normas Tecnicas, and will be organized to:

- (a) Establish specifications to define quality and regulate the acceptance of materials;
- (b) Develop uniformity in testing methods;
- (c) Codify rules and requirements relative to products and the methods of carrying out work projects;
- (d) Fix types and standards for industrial production;
- (e) Unify and fix terminology and symbols.

The association will cooperate with existing Brazilian and foreign technological laboratories or institutes. It expects to bring together the principal producers and consumers of products in order to harmonize their joint interests, looking toward permanent and progressive improvement of technique in industry and engineering in Brazil.

The Brazilian Government is expected to continue the practice, which it started in connection with the original private association, of approving standards developed by the association for use by the Government. When thus approved, it is understood that Federal, State, and local government departments will refrain from buying materials which do not conform to the standard

**Brazilian Government may approve standards for use by all Federal, State, and local government departments**

requirements. Standards set up in the past and approved by decree of the Federal Government include one on bar steel, and others on concrete composition, breaking and doubling tests for metallic materials, organic impurities in sand for concrete, and numerous others.

A drive for members to include companies, government units, individuals, and others, is now going forward. Each individual member will be entitled to one vote, while company (collective) members have three. Members accepted now will be known as charter members, and will have the right to propose that the association take immediate action looking toward the development of a standard on a given product or method. Government units which are members will have the same votes as companies, and government officials may join as individuals with voting privileges.

The new association expects later to enter into active contact with American organizations such as the National Bureau of Standards, the American Society for Testing Materials, and the American Standards Association.

Applications for memberships are now being received at the Instituto Nacional de Tecnologia, Avenida Venezuela, 32, Rio de Janeiro, Brazil.

## U. S. and Britain to Confer On Aircraft Standardization

A program of aircraft standardization extending to gun calibers, parts, and other phases of aircraft construction is to be worked out by joint efforts of American and British representatives. A four-man informal committee named by President Roosevelt includes Secretary of War Stimson, Secretary of Navy Knox, Defense Commissioner Knudsen and Treasury Secretary Morgenthau.

Designed so that plants now building one model of pursuit plane for the British and another for the United States will hereafter concentrate on one design, the plan will require Army and Navy experts to pass on details. Ten leading technicians from Great Britain are expected to confer with United States officials. The development was disclosed by Mr. Morgenthau who said that in changing designs Army and Navy requirements must be adhered to but that as a secondary consideration efforts will be made to conform to British desires.—*Automotive Industries*, November 1.



## ASTM Committees Propose Tentative Revised Standards

**T**ENTATIVE revisions have recently been published by the American Society for Testing Materials on several standards that have been approved by the American Standards Association. If and when the revisions of these several standards are adopted by the Society, steps to bring the revised standards before the ASA will be taken. These standards are:

Standard Specifications for Gypsum (A49.1-1933; ASTM C 22-25; ASTM committee C-11)

Standard Methods of Sampling and Testing Turpentine (K33-1937; ASTM D 233-36; ASTM committee D-1)

Standard Specifications for Fire Tests of Building Construction and Materials (A2-1934; ASTM C 19-33; ASTM committee C-5)

Standard Specifications for Electric-Fusion-Welded Steel Pipe for High-Temperature and High-Pressure Service (B36.11-1939; ASTM A 155-36; ASTM Committee A-1)

Testing Molded Materials Used for Electrical Insulation (C59.1-1940; ASTM D 48-39; ASTM Committee D-9)

Testing Electrical Insulating Oils (C59.2-1937; ASTM D 117-36; ASTM Committee D-9)

Of these standards, the specifications for electric fusion welded steel pipe is one of a group of pipe standards under the jurisdiction of ASA sectional committee B36 on Dimensions and Materials of Wrought-Iron and Wrought-Steel Pipe and Tubing. This committee is working under

## ASA Committees consider revisions to American Standards suggested by ASTM

the leadership of the American Society of Mechanical Engineers and the ASTM.

The tentative revision recently published affecting the testing of electrical insulating oils provides for modifications in the dielectric strength test to correspond with practices now being followed in various laboratories which represent improvements over present procedure. In addition to the tentative revision of this standard there is now before ASA sectional committee C59 on Electrical Insulating Materials in General a revision recently adopted by the ASTM, which is being considered by the committee for recommendations regarding approval as American Standard. The revision provides a reference to the Tentative Method of Test for Color of Lubricating Oil and Petrolatum by Means of ASTM Union Colorimeter (D155-39T) for determining the color of insulating oils. Committee C59 is also considering recommendations to the ASA on approval of the Standard Methods of Testing Powders Used in Manufacturing Electrical Insulators (ASTM D 392-38).

## Draft Standards Received from Great Britain and Australia

Drafts of proposed standards have been received recently from Great Britain and Australia. These are listed below and may be borrowed by members of the American Standards Association from the ASA Library.

### Australia

Instrument Transformers (This is to be No. C 45-1941 and is a draft revision of No. C 45-1928 T)

### Great Britain

Automobile Lamps (CF ELG 6944)

Lathe Centers (CF ME 6951. This is draft revision of 426-1931.)

Micrometers—Internal (CF ME 6964. This is the third draft.)

Comments on the above draft standard from Australia may be received at the office of the

Standards Association of Australia until April 15, 1941. The American Standards Association will be glad to forward to the Australian office any comments sent to the ASA.

## Australian Association Works On Tool Steel Standards

At the request of the Aircraft Production Commission of the Ministry of Munitions of Australia an attempt is to be made to limit the number of specifications required for tool steels in order to facilitate manufacture of such steels, and to establish a limited range of Australian Specifications for Tool Steels.

A draft of an Australian Standard Schedule of Tool Steels, following the lines of BS 5005, British Standard Schedule of Wrought Steels for Automobiles, has already been prepared.

# ASA Library Receives New Foreign Standards

**T**HE Library of the American Standards Association has just received the following foreign standards. These are available for loan to ASA members. When ordering copies please refer to the number of the standard as well as the title. The standards are published in the language of the country from which they were received.

## Australia

Mosquito Netting for Hospitals and Kindred Institutions (Commercial Standard No. 10, Part 1, Section 8)

## Emergency Standards

Aluminum Alloy Bars, Extruded Sections and Forgings—  
not exceeding 3 inches diameter or minor sectional dimension (E D624-1940) (British Standard DTD 384A)  
Queensland Maple (E D801-1940)  
Alpine Ash and Mountain Ash (E D802-1940)  
Hoop Pine (E D803-1940)  
4-Gallon, Non-Returnable Black Steel Drums (E K501-1940)  
6-Gallon, Non-Returnable Black Steel Drums (E K502-1940)

## Canada

Established Lists of Machine Screws and Square and Hexagon Machine Screw Nuts (B29-1940)  
Steel Structures for Buildings (S16-1940)  
Cast Iron (S61-1940)

## Denmark

Tins for Full-Conserved Fish—Fish-Hermetic (191, Sheet 1)  
Tins for Half-Conserved Fish (191, Sheet 2)  
Coal and Coke; Determination of Softening Point and Fusion Point of Ash (192)  
Electrical Measuring Instruments: Prescriptions (193)  
Graphical Symbols (194)  
Household Bottles (195)  
Preservation-Glasses with Covers and Rings (196)  
Coupling for Fourwheeled Trailers for Motor Vehicles—  
Trailer-Totalweight up to 12 Tons (197)  
Symbols on Ground-Plans—Maps 1:100-1:5000 (198)  
List of Standards concerning Water-Analyses (200)  
Water Analyses—Sampling (201)  
Water Analyses—Introduction (202)  
Water Analyses—Determination of Color (205) of Reaction-Number (206) of Chloride Content (210) of Sulphate Content (211) of Hydroxylion-, Carbonateion-, and Bicarbonateion Content and of the Hardness by Titration (213) of Nitriteion Content (214) of Nitrateion Content (215) of Phosphateion Content (216) of Iron Content (225) of Calciumion and Magnesiumion Content and Analytic Determination of the Hardness by Weighing (226) Determination of Manganese Content (227) of Lead Content (228) of Copper Content (229)  
Water Analyses—Calculation of the Content of Alkaline Metals (231)

Water Analyses—Determination of Ammonia Content and Ammonium Content as  $\text{NH}_4$  (232) Determination of the Content of Free Carbon Dioxide and of the Marble-Reaction (245) Determination of the Content of Free Carbon Dioxide by Titration (246) of the Content of Dissolved Oxygen (247) of Silica Content (240)

Pipes and Flanges—List of Standards (500) Comments and Directives for Use of the Standards (503) Nominal Diameters (505) Nominal Pressures, Working Pressures, Testing Pressures (507) Bolt-Hole Diameters, Edge-Distances and Arrangement of Bolt-Holes in Flanges (509) Bolt-Materials and their Use (511) Stud Bolts with 2 Nuts,  $\frac{1}{2}$ "-3" WG and 12-76 MG (513)

Pipes and Flanges—List of Steel Tubes, Tn 2, 5-100, Dn 6-2000 (515) List of Thickness of Cast-Iron and Cast-Steel Tubes, Tn 2, 5-100, Dn 10-2000 (517)

Pipes and Flanges—Seamless Steel Tubes of St 00.29, General Commercial Quality, Quality I, Class B, Tn 2, 5-25, Dn 6-600 (520) of St 35.29, Quality II, Tn 2, 5-100, Dn 6-600 (522) of St 45.29, Quality II, Tn 2, 5-100, Dn 6-600 (524) of St 55.29, Quality II, Tn 2, 5-100, Dn 6-600 (526)

Pipes and Flanges—Welded Steel Tubes of St 34.28, Fusion-welded, Tn 2, 5-40, Dn 50-600 (530, Sheet 1) Tn 2, 5-25, Dn 650-2000 (530, Sheet 2) Lapwelded, Tn 2, 5-40, Dn 250-2000 (535)

Pipes and Flanges—Light Threaded Pipes of St 00.29, General Commercial Quality, Quality I, Class A, Tn 2, 5-16, Dn 6-150 (540) Heavy Threaded Pipes of St 00.29, General Commercial Quality, Quality I, Class A, Tn 2, 5-25, Dn 6-150 (541) Seamless Threaded Pipes of Quality, St 35.29, Quality II, Tn 2, 5-100, Dn 8-300 (545) Cast-Iron Flanged Tubes, Tn 10-16, Dn 40-1200 (548) List of Flanges and Joints, Tn 2, 5-100, Dn 10-2000 (550)

Pipes and Flanges—Connection-Measures for Round Flanges, Tn 2.5-16, Dn 10-2000 (552, Sheet 1) Tn 25-100, Dn 10-2000 (552, Sheet 2) Special Performance, for Hydraulics, Tn 16-64, Dn 175-1600 (556) Connection-Measures for Oval Flanges, Tn 2, 5-16, Dn 10-100 (554)

Pipes and Flanges—Round Cast-Iron Flanges A1, Tn 2, 5, Dn 10-300 (560, Sheet 1) Tn 2, 5, Dn 325-2000 (560, Sheet 2) Tn 6, Dn 10-300 (561, Sheet 1) Tn 6, Dn 325-2000 (561, Sheet 2) Tn 10, Dn 10-300 (562, Sheet 1) Tn 10, Dn 325-2000 (562, Sheet 2) Tn 16, Dn 10-600 (563) Tn 25, Dn 10-500 (564) Tn 40, Dn 10-400 (565) Tn 64, Dn 10-150 (566) Tn 100, Dn 10-70 (567) Special Performance, for Hydraulics, Tn 16, Dn 650-1600 (569, Sheet 1) Special Performance, for Hydraulics, Tn 25-64, Dn 175-1000 (569, Sheet 2)

Pipes and Flanges—Round Cast-Steel Flanges A2, Tn 16, Dn 10-300 (570, Sheet 1) Tn 16, Dn 325-2000 (570, Sheet 2) Tn 25, Dn 10-300 (571, Sheet 1) Tn 25, Dn 325-2000 (571, Sheet 2) Tn 40, Dn 10-300 (572, Sheet 1) Tn 40, Dn 325-1600 (572, Sheet 2) Tn 64, Dn 10-300 (573, Sheet 1) Tn 64, Dn 325-1200 (573, Sheet 2) Tn 100, Dn 10-700 (574)

## Germany

Specifications for Ferrous and Non-Ferrous Metals (DIN Taschenbuch 4, Auflage 14, April 1940) Note: This is available for use only at the office of the American

Standards Association, and not for loan from the ASA office. The ASA will, however, be glad to transmit orders for the standard to the national standardizing body of Germany, but there may be delay in delivery because of delay in the mails.

### Great Britain

Flame-Proof Electric Lighting Fittings for Use in Coal Mines and Other Places Where Inflammable Gas or Vapor May be Present in the Surrounding Atmosphere (889-1940)

Methods of Testing Latex, Raw Rubber, and Unvulcanized Compounded Rubber (902-1940)

Methods of Testing Vulcanized Rubber (903-1940)

Terms and Sizes of Envelopes (917-1940)

### Revised

Graphic (Recording or Chart-Recording) Ammeters, Voltmeters, Wattmeters, Power-Factor Meters and Frequency Meters (90-1940)

Glossary of Aeronautical Terms (185-1940)

Motor Starters and Controllers and Resistors Employed Therewith, Excluding Liquid Starters and Controllers and Single-Phase AC Models (587-1940)

Methods for the Sampling and Examination of Bituminous Road Mixtures (598-1940)

### War Emergency Standards

Aluminum Bars Containing Small Proportions of Copper and Zinc for General Engineering Purposes (918-1940)

Screw Thread Gauge Tolerances (919-1940)

## New Law Requires Labels for Wool

Comprehensive labeling requirements for wool were made mandatory to become effective July 14, 1941, when the Wool Products Labeling Act was passed by Congress and signed by the President. All products which move in interstate commerce and which contain wool—with the exception of carpets, rugs, mats, and upholstery fabrics—come under the provisions of the law.

These products shall be labeled to indicate the percentage of the total fiber weight which is wool, excluding ornamentation which does not exceed five per cent of the total fiber weight. If the article contains any fiber other than new wool it must be labeled to show the percentage by weight of "wool" (meaning new wool), "reprocessed wool" and "reused wool." Each fiber other than wool, if the percentage by weight is five per cent or more, must be named. The percentage of filling or adulterating matter must be given.

The manufacturer is required to affix the stamp, tag, or label, which shall remain affixed whether the wool product remains in its original state or is made into garments or other articles. If the manufacturer's name is removed, the name of the person who makes the substitution must be placed on the goods.

A fine of \$5,000 or imprisonment for a year, or both, is provided for failure to attach the label or for removing or mutilating it.

## Food Chains, NCRC Cooperate On Grade Labeling Program

Food chain stores are starting a one-year experimental A-B-C grade labeling program for canned fruits and vegetables in cooperation with the National Consumer-Retailer Council, according to an announcement in *Business Week*, November 30. Kroger Grocery & Baking Company, Grand Union Tea Company, and D. Pender Grocery Company have had their grade-revealing labels approved by the NCRC. Others are about to fall in line, according to the *Business Week* announcement, and Great Atlantic & Pacific Tea Company, which long has grade-labeled some of its vegetables, has now decided to include fruits and California spinach and asparagus.

The cooperative program, *Business Week* explains, was worked out by NCRC and the National Association of Food Chains, of which A&P is not a member. Labels will bear grade designation, a brief description of the A-B-C scoring method, a description of the contents of each product, plus information required by the Food, Drug and Cosmetic Act. At the option of distributors a line may be added saying the label has been approved by NCRC. The standards used will be those developed by the Agricultural Marketing Service, U. S. Department of Agriculture. Peas, tomatoes, corn and peaches will be used in the one-year experiment, but chains may add other products if they want to.

## Wood Pole Standards Proposed As American Standards

The ASA Telephone Group has recommended to the American Standards Association that six American Tentative Standards for wood poles be advanced to the status of American Standards. These standards cover:

Northern White Cedar Poles (05bl-1931)

Western Red Cedar Poles (05cl-1931)

Chestnut Poles (05dl-1931)

Southern Pine Poles (05el-1931)

Lodgepole Pine Poles (05fl-1933)

Douglas Fir Poles (05gl-1933)

This action was taken in response to the policy of the ASA Standards Council to reconsider all tentative standards and to either advance them to American Standards or to drop them from the list of approved standards.

# Information, Please

THE library 'phone rings furiously. "Hello!"—"Yes, we have that standard for pipe thread."—"Your reference is on page 7"—"All right."—"We'll send it right out so you can check it in the morning."

The 'phone rings again. Someone wants to find out about lubricating oils. Someone else wants to know about stresses for steel girders.

The door opens and there is an engineer from a construction company wanting to know about the Building Exits Code.

The 'phone rings again. This time it is the British Purchasing Commission wanting a photostat copy of some specification needed in placing an order.

The American Standards Association library is a busy place. Engineers in companies all over the United States come to it for information about industrial standards and specifications. Out of efforts to answer these questions the Association has built up a library of more than 20,000 standards, specifications, and related material. This includes standards from more than 20 countries having national standardizing bodies, reports developed by the International Standards Association, and standards established by several hundred technical societies, trade associations, and Federal government departments in this country. The Library also makes a point of keeping on hand up-to-date lists of trade and technical publications which may be of interest in connection with standardization work.

## Only One of Its Kind

This collection of standards is the only one of its kind in the United States. If you go to the New York Public Library for material on standards they will probably send you to the American Standards Association. The Engineering Societies Library will likely do the same thing. For the ASA Library is the only place where certain types of technical information can be found. Since the outbreak of war in Europe, for example, it has been deluged with requests for foreign standards and purchasing specifications. The British Purchasing Commission itself has frequently called upon the American Standards Association for material which could not be obtained in time from the London office.

All of this standardization material is made available either as outright sale material, or

through loans from the library files. The Association comes as near as it can to bringing its library into the factories and offices of its company members. If you are too far away to call at the Library and in too much of a hurry to wait for a loan by mail, the librarian will consider your request an emergency, hunt up what you want, and read it to you over the phone. Then the material will be sent you by mail for an additional check up.

The Library is also of assistance when a company member is setting up a new standards department or reorganizing and improving an existing standards department. It will look up material on how the standards departments in other companies are organized. It will obtain for the company the standards that it wishes to keep on file, and will give the personnel of new or reorganized departments many other practical helps.

## 250 Questions Every Week

The Library receives on an average about 100 telephone requests a week, and about 150 written requests for material of one sort or another. Much of this is outright sale material, but the reference questions average from three to ten per day and any one of these questions can require a lot of work.

Here are a few sample questions: Is there any collection of state laws on standards having to do with marketing farm produce? What are the FTC rulings on vacuum tubes? Are there any international standards on bolts and nuts? Please furnish the British Standard on galvanized wire. What is meant by the following: RLM Standards, IRS Standards? Please supply the German Standards on brass pipe, symbols MS60 and F34.

Some time ago the Library received a request from a foreign national standardizing body interested in standards for house trailers. It was able to dig up a proposed Swedish standard on the subject in addition to considerable American material. This information from the ASA, while of direct value to the foreign organization, may also prove to be of considerable value to American manufacturers of motor vehicles and equipment.

Frequently before the war and even now foreign standardizing bodies send drafts of proposed standards to the ASA with requests for comment and criticism. These are forwarded by the Li-



brary to trade associations in the field of the proposed standard, thus giving them an opportunity to influence the development of a standard which may later on affect the sale of the particular product abroad.

The Library is also called upon sometimes to furnish technical information for use in legal cases. Two recent questions in the legal field involved the American Standard Safety Code for Elevators, and a technical society's standard for oil storage tanks.

### Keeps File of Foreign Standards

The ASA keeps as complete a file as possible of the national standards of other countries. These are very much in demand, particularly since the war has stimulated foreign orders in the heavy industries and has made it difficult to obtain the specifications from abroad.

A typical day in the Library is apt to commence with visitors asking to be directed to some ASA committee meeting. The telephone starts at an early hour with requests for copies of American Standards, ASTM Specifications, Federal Specifications, German Standards, British Standards, etc. Sometimes the prospective buyer knows the number of the specification he is asking for. More often he does not, which means additional time spent in locating the material. Under the present world emergency conditions the last copy of a foreign standard is never sold, which means that a photostat copy must be provided if the available supply has run low. In the meantime visitors are dropping in to buy standards or to do reference work. Someone on the staff wants to discuss the correct form for listing bibliographical references. An engineer wants the latest draft covering one of his projects. There is last month's issue of the monthly magazine, INDUSTRIAL STANDARDIZATION, to be indexed. A new list of free standards is about to be sent out. A new price list is in the making. Material is waiting to be classified and catalogued for the library files. A man wishes to sell the services of his organization to the ASA Library—"It is something that you cannot afford not to have!" Not all of these things happen every day, but they are all tasks that the Library is called upon to do. For in addition to the customary loan and reference services, the ASA Library is in charge of distributing free copies of American Standards to ASA members, indexing the ASA magazine, and making up the price lists of American Standards.

### Many Unusual Questions

In the course of a year the Library is called upon to answer many unusual questions. Someone wants to get the specifications for high-voltage cable used in Neon signs. A firm phones in to find out what colors to use in painting pipe

## Services to Members

The Information Service and Reference Library is but one of the services which the American Standards Association provides for its 2,000 company members throughout the United States.

The Association also publishes this magazine, *Industrial Standardization*, which every month brings to the engineers and executives of member companies news of standardization activities both in this country and abroad, and frequent articles on the practical application of standards in industry.

The Association supplies members with free copies of newly approved standards in which they are interested and also calls the attention of members to new standards as published. For the convenience of industry the Association keeps on hand many foreign standards and standards of trade associations and technical societies, as well as American standards. All of these are available to company members at a 20 per cent discount from the regular price.

The ASA Company Member Forum provides an opportunity for company members to informally exchange ideas to help in solving their standardization problems.

lines in a manufacturing plant. Another wants specifications for glue for pasting labels on wooden beer barrels. An engineer comes in to get the government specifications for TNT. Someone else wants Japanese standards for nuts and bolts. An insurance company even asked us to dig up standards for cages for housing lions and bears. Sometimes it takes the ASA Library a week or more to track down an answer. For this reason and because of the cost of keeping up the service, the Library has had to cut down on work for non-members; although it still gives help wherever possible.

To render some idea of how this information is applied, an engineer recently borrowed a collection of pamphlets on the subject of Preferred Numbers which helped him to solve several application problems in his company.

A petroleum company borrowed several indexes of foreign national standards from the

ASA Library and from these was able to pick out the specific standards needed for a particular research job. These standards were in turn obtained from the ASA Library without the delay and difficulty of getting them from abroad.

#### A Glimpse into the Future

The ASA Library has as yet by no means reached a point of complete adequacy. It started as a small file of standards and draft standards loaned upon request. From that it has grown to what it is today. Its possibilities of service to members are not yet fully realized.

For example, there is a constant need to keep companies informed of standardization developments in their own particular fields. At present not much of this can be done; but some day it may be possible for a production manager in a company making valves and fittings to ask the librarian to keep him posted on the preparation of new editions of the standards for flanges and fittings, for pipe threads, etc. Whenever new drafts are released by the committees in charge of these projects, the material will be loaned to the company, thus keeping it in constant touch with the work. This same service is an important aid to trade associations in keep members informed of standardization developments that may affect their business.

On many occasions members call for foreign standards, and then in order to use them must

have them translated. The Library needs to have many of these standards translated, but at present such additional service for company members is not possible.

Because of the many contacts which the American Standards Association has in this country and abroad it is in a unique position to conduct inquiries and do research on standardization questions in particular fields. This type of work is much in demand; but so far it has not been possible to do more than scratch the surface. A few years ago the Library made a survey as to use of the American Standard for Safety Glass by state regulatory bodies, and sent out the results to automobile companies and manufacturers. A few such surveys have been carried out for work abroad in various fields.

Another much-needed service consists in notifying companies when special indexes are published, for example, the British Index, or the ASTM Index; and in keeping track of the progress of some standard published by another organization, automatically notifying the interested group when this standard is ready.

The object of the ASA Library is to grow along the lines where its services are most needed. It operates on the theory that the best library is not the one with the largest number of documents, but the one that keeps the largest amount of material in circulation and can answer the greatest number of questions.

## Alice Edwards Heads Survey On Labeling of Canned Foods

**C**ONSUMERS' opinions on the grade labeling of canned food products will be studied during the next few months in a number of large cities throughout the country, the Agricultural Marketing Service announced November 19. The survey will be directed by Dr. Alice L. Edwards, formerly Executive Secretary of the American Home Economics Association, who is now a member of the ASA Standards Council representing the AHEA. Miss Edwards was Executive Secretary of the AHEA at the time that organization became a member of the American Standards Association, and has been closely associated with and instrumental in carrying along all the work of the ASA on standards for consumer goods.

The survey to be directed by Miss Edwards will be carried out at selected retail food stores cooperating in the study. Consumers who purchase Government grade-labeled canned foods will be handed a questionnaire. Through the informa-

tion obtained from these questionnaires, as well as from other sources, the Agricultural Marketing Service hopes to determine the kind of canned food products consumers buy, and whether the housewife is satisfied with the quality of the Government-graded canned products and will purchase them again.

A "continuous inspection" service has been started recently by the Department of Agriculture on an experimental basis as a means of checking on the labeling. Under agreements with five canning concerns, the entire pack is inspected at each step of the canning process by Federal inspectors. A large part of the season's pack carries direct to consumers such officially certified designations on the labels as U. S. Grade A, U. S. Grade B, and U. S. Grade C. The five companies which have signed up with the Department of Agriculture for its continuous grading inspection service are: the Cherry Growers Inc., Traverse City, Mich.; Curtice Bros. Company, Rochester,

N. Y.; Florida Fruit Cannery, Inc., Frostproof, Florida; Schuckl & Company, Inc., Sunnyvale, Calif.; and the United States Products Corporation, Ltd., San Jose, Calif.

"Miss Edward's outstanding service in the interest of consumers admirably fits her for this position," said C. W. Kitchen, chief of the Agricultural Marketing Service, in announcing her appointment. "As a representative of the American Home Economics Association she has participated in numerous conferences of representatives of national business and professional organizations dealing with problems of standards, labeling, and methods of merchandising."

### Proposed Standard for Safety Signs Would Define Accident Hazards

Specifications for Accident Prevention Signs have been proposed for approval as American Standard by the National Safety Council, sponsor

for the work of the committee which prepared the proposed standard. The specification covers design and use of warning signs or symbols to indicate and define specific hazards which might cause accidental injury to workers or to the public. Tags and other signalling devices are not included, but the committee will be continued to carry out further work on these devices.

### Revised List of All Commercial Standards

The National Bureau of Standards has issued a revised list of Commercial Standards. This new official list supersedes a previous list which had been revised to July first.

Most of the Commercial Standards listed can be purchased from the Superintendent of Documents, Washington, D. C., at five or ten cents each. Others may be obtained in mimeographed form from the National Bureau of Standards.

## ASA Standards Activities

### Standards Approved Since Publication of Our November Issue

- Addendum B16e4 to American Standard Steel Pipe Flanges and Flanged Fittings, B16e-1939
- Specifications for Welded and Seamless Steel Pipe (Revision of B36.1-1936) American Standard B36.1-1940
- Specifications for Lap-Welded and Seamless Steel Pipe for High-Temperature Service (Revision of B36.3-1939) American Standard B36.3-1940

### Standards Now Being Considered by Standards Council for ASA Approval

- Manhole Frames and Covers for Subsurface Structures A35.1
- Soldered-Joint Fittings A40.3
- Keyways for Holes in Gears B6.4
- Cast-Iron Pipe Flanges and Flanged Fittings, Class 250 (Revision of B16b-1928)
- Steel Butt-Welding Fittings B16.9
- Wrench-Head Bolts and Nuts and Wrench Openings (Revision of B18.2-1933)
- Safety Rules for the Installation and Maintenance of Electrical Supply Stations, Part I of the National Electrical Safety Code C2, Part I
- Electric Fences, Part 6 of the National Electrical Safety Code C2, Part 6
- Protection of Structures Containing Inflammable Liquids and Gases—Part 3 of Code for Protection Against Lightning (From status as American Tentative Standard to American Standard) C5, Part 3
- A-C Power Circuit Breakers C37.4
- Methods for Determining the Rms Value of a Sinusoidal Current Wave and a Normal Frequency Recovery Voltage C37.5

- Schedule of Preferred Circuit-Breaker Ratings C37.6
- Operating Duty for Standard and Reclosing Service C37.7
- Rated Control Voltages C37.8
- Test Code for Oil Circuit Breakers C37.9
- Commercial Standards for Sun Glass Lenses (CS 78-39; CS 79-39)
- Methods of Testing and Tolerances for Tubular Slewing and Braids (ASTM D 35436) L13
- Proposed American Recommended Practice for the Use of Explosives in Anthracite Mines M27
- Northern White Cedar Poles 05b1
- Western Red Cedar Poles 05c1
- Chestnut Poles 05d1
- Southern Pine Poles 05e1
- Lodgepole Pine Poles 05f1
- Douglas Fir Poles 05g1
- (The above six standards in the Wood Pole group are under consideration as American Standards from status of American Tentative Standard)
- Motion Picture Standards Z22.2 through Z22.33
- Specifications for Accident Prevention Signs Z35.1

### New Project Authorized

- Classification of Materials for Tools, Fixtures and Gages B52

### New Projects Being Considered

- Application of Statistical Methods to Quality Control of Materials and Manufactured Products
- Domestic Electric Flat Irons

# Have You Thought of This Aid to ? Speeding Your Production Program !

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- Chucks and Chuck Jaws B5.8-1936.....45¢
- Lathe Spindle Noses B5.9-1936.....50¢
- Twist Drills, Straight Shank B5.12-1940.....55¢
- Involute Splines, Side Bearing B5.15-1939.....65¢

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